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— 1909 —

CATALOG
AND PRICE LIST

U. S. Department of Agriculture
Washington, D. C.

STRAWBERRY PLANTS



10,000,000
PLANTS
75 VARIETIES

BY THE DOZEN
OR HALF MILLION
GUARANTEED
TO GIVE SATISFACTION

D. MC NALLIE
PLANT AND FRUIT CO.
SARCOXIE, MISSOURI
DURANT, OKLAHOMA

A General Plant Talk

Are you going to plant strawberries this spring? If so please let us talk to you a few minutes. The main thing, as in all things, is to start right. Select well-drained land and prepare it thoroughly. Do it well. It will pay you well. And now for the plants—the first of the two essential things to your success.

Be-sure to get plants true to name. If early varieties pay best you would be at considerable loss to discover later on that you had late varieties, and vice versa. Or if you wanted a good shipper like Aroma or Gandy it would be discouraging to learn after all your work that you had an inferior sort like the Michel. Order plants to be fresh dug at time of shipment, and to be taken from the beds that have been properly cultivated, and that have never fruited. To save delay in planting, and loss of plants after setting, each plant should be cleaned separately of all dead foliage and runners. They should be carefully counted, tied and packed by experienced persons so as to reach you in good condition.

To secure plants that are true to name, properly grown, prepared and packed, patronize those growers who are established and experienced, who are responsible for their guarantees, and who have acreage large enough to supply their demand without rebuying from jobbers or careless growers.

Then, having secured the right kind of plants the other essential thing is extensive cultivation. If there are any secrets in growing good strawberries they are, securing the right kind of plants, and then taking care of them by the sweat of your brow or some other. We have noticed invariably that they who follow these essential things make a success of the business, and those who do not, either become discouraged or make a failure.

A Personal Plant Talk

We offer for the season of 1909 the largest and best stock of strawberry plants we have ever grown. A complete assortment of all the standard varieties, and a good supply of most of the newer ones. And if given the same soil, same conditions, same culture, we guarantee they will produce as much and as fine fruit as any grown—North or South, East or West, improved or pedigreed. This statement is based on the reports from tests by individual growers and experimental stations.

Following is the yield from the plants of two contestants at fruiting time in 1905, on the grounds of the Indiana Experimental Station:

	From McNallie Co.	From Pedigree Co.
Haverland	189. bu. per acre	145 bu. per acre
Aroma	141.75 bu. per acre	98 bu. per acre
Bubach	182.25 bu. per acre	140 bu. per acre
Clyde	182.25 bu. per acre	81 bu. per acre

695.25

484

We guarantee all plants true to name. We make a specialty of this, and can doubly assure it, for we sell no plants unless grown under our supervision. Each plant is cleaned separately of all dead leaves and runners, so you are not delayed in planting. This often means a saving of 50c to \$1.00 per thousand over the methods of many plant dealers. All shipments are so packed that we guarantee them to reach you in good condition by mail or express.

Winfield, Kan., 11-5-'07.

Dear Sirs:

Enclosed find check as per invoice of the 2nd. Your plants were fine and the manner of labeling and packing excellent.

Yours truly,

CHAS. F. MARTIN,
Prop. Winfield Nursery.

The Strawberry

Within the last twenty years the strawberry has become one of the most important fruits. Being the first to ripen in the spring, its tempting appearance, its delicious taste, and its wholesomeness as a diet, has made it universally popular. It has been aptly named the "Queen of Small Fruits."

It was not so many years ago that strawberries were considered a luxury, and the more improved varieties were only grown in the gardens of the rich, but today in every home where they can be secured, they are deemed almost a necessity in their season.

The strawberry is easily grown and thrives in almost every locality. "And so general has become the culture of this fruit for home use that every strawberry patch." A few hundred plants set on a small plot of ground and properly tended, will produce an abundance of fruit for table use and canning. And on account of the ready sale and the steadily increasing demand for this fruit in the larger city markets, some sections are engaging more extensively in the commercial growing of strawberries than any other crop.

Southwestern Missouri and Northwestern Arkansas are especially adapted to the commercial growing of strawberries, and from numerous towns in this district train loads of the fruit are shipped each season to all parts of the country. But rapid as has been the increase in the production, there are many markets that have not yet been reached, and very probably there are more people who do not have a sufficient supply of strawberries, than there are those who do. And it is reasonable to conclude that the demand for all kinds of fruit will increase at a faster ratio in the future than in the past, as people are realizing the healthfulness of more fruit as food, and less flesh.

Our Specialty

is the growing and shipping of Strawberry Plants. The business was established in 1894 by D. McNallie, who became eminently known as a successful grower and shipper of strawberries and strawberry plants. The members of the D. McNallie Plant and Fruit Company have been associated with the business since its establishment, and our experience has been gained by active work in all lines of the industry. We are enthusiastic and confident in regard to the future of fruit growing, and that we have found the occupation profitable and congenial is evident from the fact that we have steadily increased our acreage from year to year.

Main Plant Fields, Sarcoxie, Mo.—Our main plant fields are located at Sarcoxie, Mo., in the Ozarks, near the southwest corner of the state where the natural advantages of soil are as perfect, if not the most perfect, for growing strawberry plants and berries as any place in the United States. About 1000 acres of strawberries are harvested here annually, being shipped in refrigerator cars principally, to the large markets of the North and West.

Our first plant and fruit bed containing twelve

acres was planted at Sarcoxie in 1894. We now have at this place one hundred and ten acres in strawberries, seventy-five acres of which are new set beds, especially cultivated for plants, and from which we will have over ten million plants of seventy-five varieties to offer to the trade this spring. In addition to the fields at Sarcoxie, are the southern branch of our plant fields at Durant, Oklahoma, of one hundred acres, and the Miami Berry Co., of Miami, Oklahoma, of one hundred and forty acres, making a total of three hundred and fifty acres of strawberries now under our management.

Southern Branch, Durant, Oklahoma.—For several years we have had a steadily increasing number of inquiries for plants for fall setting and also a demand from Southern growers, who plant during the months of January and February. On account of not often being able to dig plants at Sarcoxie, because of the uncertainty of the weather during these months, we secured land at Durant, Okla., and planted fifty acres to strawberries at that place in the spring of 1907. These fields have been increased by fifty acres planted last season.

Durant is situated in the extreme southern part of the state, being twelve miles north of the Texas line, and twenty miles north of Denison, Texas. The soil appears to be especially adapted to the growing of strawberry plants and strawberries. In the season, it is thirty days earlier than Southwestern Missouri and on account of the mild winters plants can be dug fresh for shipment at any time during the fall or winter.

This branch is under the management of Mr. C. W. McNallie, and we have a large stock of all the leading varieties to offer to the trade this spring, grown at that place.

At Sarcoxie, Mo., we have the Wells-Fargo Express company, and at Durant, Okla., the Wells-Fargo and the American Express companies.

Our Purpose

The five active members of this company have practically grown up in the commercial growing and shipping of strawberries and strawberry plants; yet we do not claim to be specialists in this line, for though we have learned some things in growing the fruit and plants, that learning has already taught us we will never know it all.

But we believe our large acreages in the different localities, not only for raising and selling plants, but in growing and shipping fruit, under the same conditions you will be growing it, place us in a position to watch the working qualities of the different varieties, and that our descriptions and information should be reliable and a benefit to you.

This industry will probably be our life work, and it is our purpose, not to see how many orders we can fill today, with just anything, so it is a strawberry plant, regardless of how grown or the variety ordered, but to furnish good plants properly grown and true to name, so that we will merit your order and your neighbor's order in the future, and we take this opportunity of thanking the many customers of the past for their liberal patronage, and the many kind words of encouragement received from them. It will be our constant study in the future, as it has been in the past, to try to give perfect satisfaction to the old as well as new customers who entrust their orders to

D. McNALLIE PLANT AND FRUIT COMPANY.

us; our success, we feel confident, depends wholly on the satisfaction we may be able to give our patrons.

Guarantee.—We guarantee all plants to be fresh dug from new beds that have never fruited, well rooted, and to be TRUE TO NAME—the most essential thing in starting a new bed. If they prove not to be so we will replace them free of charge. While we do not claim to raise better plants than any grower on earth, we do claim that we raise them better than some, and as good as the others.

Filling Orders.—At Sarcoxie we can commence filling orders as early as we can dig plants in the spring, about March 1st; though we frequently have warm spells during the winter that we can take up plants here if needed. At Durant, on account of the mild winters and earlier season, we can fill orders at most any time during the winter or spring. We will not fill any orders from either place after May 10th, or before October 10th, of each year. We do not advise planting during this period, as a great deal of the vitality of the one year old plants has been used to form foliage and fruit, and the new plants on spring set beds are not matured enough to give buyers satisfactory results. But from October 10th to May 10th, of each season, we will be in a position to give your order careful and prompt attention.

Place of Shipment.—Orders will be filled from the nearest your shipping station so as to lessen the expense of transportation, unless it is specified that plants are desired from Sarcoxie or Durant.

All orders or inquiries addressed to either place will receive prompt attention, as there are five members of this company and each place is under the personal supervision of some one experienced in growing, packing and shipping plants.

Acknowledgment and Notification.—All orders are booked, with date of shipment desired, as soon as received and a postal card acknowledging receipt of order and the amount enclosed, mailed to your address.

When the order is shipped, a card is mailed giving date of shipment, and instructions in regard to the treatment of plants on arrival.

When to Order.—Order early by all means, while the plants are in a dormant condition before they commence to grow in the spring; they will ship better, stand more neglect and rough usage, and will start off better when set out. Allow time enough before you need the plants, so that if we are crowded and you should have to wait a day or two, it will not inconvenience you. The best plan is to order a week or two ahead, and state the date you wish them shipped. Another advantage in ordering early, is that our stock is complete and you are sure of getting all your order filled.

Substituting.—We will not substitute any variety for those ordered, without permission. Would advise you to permit such substituting if it can be done with plants equally as good for the purpose wanted, as it might save time if we should be out of the kind ordered, especially late in the season, when a day or two is very important.

Preparing Plants.—All plants are dug fresh when ordered, and each plant is cleaned separately. We not only remove all runners and dead leaves, but take off nearly all the foliage. We find this makes the plant lighter to ship, much less liable to heat, and if the conditions are not very favorable, the foliage dies

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after the plants are set out before they start to grow. After plants are cleaned they are carefully counted and tied in bundles of 25, each bunch plainly labeled; unless the order is for 3,000 or more, of any one variety, when they are packed separate in plain crates, and each crate plainly branded with the name of the variety.

Packing and Guarantee.—We take extra care in packing our plants and guarantee all express or mail order shipments to reach their destination in good order. If they are lost on account of delays or accidents, we will replace them free of charge, if notified promptly. We pack in boxes as light as possible, considering the way they are handled in shipment, and use damp moss, not wet. A grower may raise good plants, but if they are not cleaned and packed properly, you will not get good results from them.

Alhambra, Cali., Apr. 12, 1907.

Dear Sirs:—Your 200 plants by mail, reached me promptly and in good condition.

Yours very truly,

J. C. AMBROSE.

Sebastopol, Cali., Apr. 20, 1907.

Gentlemen—I received the strawberry plants in good condition by express.

Yours truly,

R. R. HAWKINS.

Van Buren, Ark., Feb. 21, 1908.

Dear Sirs:—Please ship me at once by express eight thousand Klondike strawberry plants. I received the other shipment, which arrived in first class shape. They were very fine.

Yours truly,

MARK SMITH.

Indianola, Iowa, Apr. 4, 1908.

Dear Sirs:—Plants arrived in good condition and are fine.

Yours truly,

O. S. PRESTON.

We have some complaints, though the number is very small, compared with the large number of orders we ship each season to nearly every state in the Union, on account of packages being delayed in transit, or broken open by careless handling. It is our rule to immediately duplicate damaged plants, and take up the matter with the transportation companies, though it takes one to two years generally to have the claims adjusted by them.

Shipping and Claims.—One dozen, twenty-five, fifty and one hundred lots can be easily sent by mail. All other sized orders should go by express, which is the quickest and safest way of shipping. Plants may be shipped by freight, with a reasonable degree of safety, if ordered while they are yet dormant, generally before March 15th, but if so shipped, it is at purchaser's risk.

Claims, if any, must be made immediately on receipt of plants. We cannot be responsible for treatment after receipt, or misfortune caused by drouths, floods, improper treatment or other causes.

Express Charges.—The reason we advise shipment by express is because plants are more or less perishable, and the quickest transportation is best for satisfactory results. And then Express Companies allow a reduction of twenty per cent from the regular merchandise rate on plants, bulbs, etc., and bill the shipment at the number of pounds weight; while freight on plants in baskets is billed at two and one half times the first class rate and in boxes or

crates at one and one half the first class rate, and one hundred pounds charged for, even if the shipment is of less weight. Taking these facts into consideration there is often not much difference in the cost of the two methods of transportation.

Sometimes, and apparently more through carelessness than ignorance, Express Companies, especially if plants are received in transit from another Company, do not allow the twenty per cent reduction, but bill the shipment at the merchandise rate, thereby requiring more than the rightful charges on plants. If requested we will place the weight, and rate per pound to your shipping point, on the card we mail notifying you of the date of shipment of your order. Should the charges be more than there stated, ask your agent to secure a refund of the over-charge, and if the request is not complied with, take a receipt for the amount paid, and mail it to our address at Sarcoxie, Mo.

Approximate Weight of Plants.—One thousand strawberry plants properly packed for shipment will weigh twenty pounds; but where four thousand are packed in a crate, which is about the average number contained in our largest sized crates, the weight is only fifteen pounds per thousand, or sixty pounds per crate. While some of the smaller plants as, Johnson's Early, Dunlap, Warfield, etc., will run only about ten pounds weight per thousand, some of the larger plants as, Bubach, Clyde, Haverland, etc., will run about twenty pounds per thousand. Therefore the approximate weight of orders containing assorted varieties packed for shipment is—

1000 plants	20 pounds
2000 plants	35 pounds
5000 plants	80 pounds
10000 plants	150 pounds

Then to determine the probable express charges, inquire of your agent for the merchandise rate to either Sarcoxie, Mo., or Durant, Okla., from which deduct twenty per cent., and figure according to the approximate weights as given above. The rate should be the same either way between the origin and destination of shipment.

Great Advantages.—While there are five active members of this company, there are three others of the McNallie family, who have stock in the company, and whose services are devoted exclusively to the company during the plant season. We know of no business that requires as much care as the plant business to keep it straight. The work generally has to be done in a rush, and the plant dealer is at the mercy of the elements and the man wanting the plants. So our great advantage in filling orders is on account of each department of the work—from the digging of the plants, through the store room, cleaning rooms, tying rooms and packing rooms—being under the careful supervision of some one of our own company who understands the business, and is anxious that every customer be well pleased.

Our Stock.—We have a nice large stock of plants for sale this season, and we solicit large as well as small orders. Can furnish them by the dozen or the half million, all from our own fields. We will sell no plants except those grown under our own supervision. We know our own fields are pure, but do not know whether others are or not.

Terms.—One-third cash with order, balance before plants are shipped. We ship by express C. O. D., if

one-third of the amount accompanies the order, purchaser to pay return charges on the money.

Remittance.—May be made by St. Louis, Chicago or New York draft, postoffice or express order, or where none of these can be had by registered letter

Reference.—First National Bank, State Bank, postmaster, express agent or any business house at Sarcocie, Mo.

Description of Varieties

For convenience in readily finding the description of any one variety, we have arranged the varieties in alphabetical order under this heading, but under the Price List following Description of Varieties, you will find them arranged according to their season of ripening.

Abington (S)—A rather new variety originating in Massachusetts. Claimed to be superior to Bubach. Ripening the same time as that variety, as large, and holds up as well in size, and more firm. A better plant maker than Bubach and more productive.

Almo (P)—Originated in Arkansas, and recommended by the introducer to be the most productive early berry grown, and a free market variety. It ripens about a week after the Excelsior, the fruit is about the size of the Lady Thompson, with a very dark color. We like the clean, healthy plant growth of this variety, being a good plant maker of medium sized, light colored foliage. It makes a very large stocky, well rooted plant, and being a pistillate we believe it is worthy of trial as an early market sort.

Armstrong (S)—Introduced from Germany twelve years ago, and until lately controlled by a few German fruit growers in New York state. Claimed to be one of the largest and most productive berries grown. "While crates often being filled with berries that run twelve to fifteen to the quart, and have sold on the northern markets for ten to fifteen cents per quart when other berries were bringing six cents." With us it is a good plant maker of large, stocky plants, extra well rooted, with thrifty, heavy, dark colored foliage.

Arnouts (S)—Originated in Pennsylvania. Large, heavy, thick foliage, and free to make large healthy plants. "Productive, firm, large bright red fruit, and ripens evenly all over. Does not send fruit stems above foliage while in blossom, and therefore is never injured by late frosts. Season early and lasts a long time."

Aroma (S)—The king of strawberries in Southwest Missouri. For several years this berry has been growing rapidly in favor, and for the last three or four years has been the leading late variety in this section of the country. It has largely supplanted the well-known Gandy as it seems to be suited to a greater variety of soils, and probably three-fourths of the acreage planted in Southwest Missouri this season will be of the Aroma. While it commences ripening a little earlier than Gandy, it generally lasts as long, is much more productive, and there is no berry that outsells it on the market. A good plant maker and free from rust. Fruit very large, roundish in shape, rarely misshapen and deep glossy red in color. If you have not tried this variety, do so, for we are satisfied you will be pleased with it.

Auto (S)—Introduced in 1905 as the largest, handsomest, and most profitable mid-season market berry.

Barton's Eclipse (P)—This is a variety that probably would be more of a favorite among growers, if its foliage was not subject to rust some years. We have fruited it several years and even when it rusts, we can generally depend on it yielding a large quantity of fine berries. Medium to late.

Beaver (S)—A good plant maker of healthy, medium sized plants and foliage. It yields a good crop of large roundish, conical berries, bright red, shining and beautiful. Excellent in quality, medium in season."

Beder Wood (S)—An old early variety, noted for its productiveness and drouth resisting qualities on account of its long roots that extend deep into the soil. In some sections the fruit runs down to a small size and has a light color.

Ben Davis (S)—Originated in Missouri. It is a good plant maker of healthy, stocky foliage. Quite productive of large berries, round, regular shape, firm and dark red. Mid-season.

Bismarek (S)—When this berry was introduced it was expected that it would supersede the Bubach. It is as productive as that variety, a better plant maker, and its fruit is firmer, but it will not produce as many extremely large berries as Bubach, and some object to their lighter color. It is medium in season and a good pollenizer.

Brandywine (S)—A berry that differs from most varieties, in having broad, heart-shaped, bright yellow seeds, and a very large calyx. A good plant maker, productive, firm and from medium to late in season. With us some seasons the calyx turns brown and injures the appearance of the fruit. This variety does well in some sections, and we note that in some parts of California, it is their most profitable berry.

Bubach (P)—A well known variety, noted for its large size and productiveness. Mid-season in ripening, but a poor plant maker, which is probably the main reason of its success in maturing large fruit. It is a variety that generally exceeds its promises at blooming time, for all of its fruit is of a marketable quality. Especially recommended for home use or near market.

Cardinal (P)—Introduced four years ago, and backed with as many strong claims and more flattering recommendations than any new variety ever introduced. This seedling was discovered in 1896, by Mr. George Streator, a horticulturist of national renown. It has been tried in different sections of the country, and flattering reports were received from every place. It has been grown among forty varieties for comparison, and in luxuriant growth and productiveness it far excelled them all. "Fruit roundish or roundish conical, medium to large, bright crimson, not fading; quite firm and solid, medium to late in season, closely following Bubach." We fruited this variety last year in a small way, and were very much pleased with it. We believe it has great merit as a commercial variety. It is a remarkable plant maker, of strong, healthy plants, and some growers assert that it can be planted four by four feet and an extra good fruiting row secured.

Challenge (S)—Originated in Missouri. Medium plant maker of medium sized, healthy foliage. "It is a great favorite in some sections, notably along the Pacific Coast, and in such it is preferred to all others. One of the best for dry weather, medium early in season."

Chesapeake (S)—New. Originated near Chesapeake Bay, from which it received its name. Introduced in 1906, and claimed to be as late as the Gandy, more productive on lighter soils, and equal to it in size. "Its shipping qualities far excel that popular standard variety, and in eating quality ranks among the best."

Climax (S)—An early variety, ripening three or four days after Excelsior and supposed to be a cross of Hoffman and Bubach. The plants are strong and vigorous and have a very prominent light green color. It is productive and lasts a long season. In the East it is quite prominent as an early market berry and seems to do well in all sections where tried.

Clyde (S)—If the season and soil are just right it is fine. The roots and crowns of the plant are above the average in size, and it is a fair plant maker, but most years it does not produce foliage sufficient to protect and properly nourish its fruit at ripening time. Too many of its berries will rot on the under side before they ripen enough for picking. It is medium early, very productive, fruit large to very large. It is strong in pollen and makes a good early pollenizer for mid-season pistillates.

Cobden Queen (P)—A very vigorous and healthy plant maker. Very productive; fruit firm, medium in size, deep crimson in color and a good shipper.

Columbia (P)—A good plant maker, and makes a thriftier, ranker, and more dark colored plant growth than any variety we grow. A variety originated here at Sarcoxie, by the well-known nurserymen, Wild Bros. It has good parentage, being a product of systematized crossing of Warfield with Gandy, two of the best shippers. The introducers have fruited the variety for six years, and offer it with confidence. They describe it as possessing about all that is desired in a commercial variety, being very large and of a bright attractive color that appeals. As to size it is uniformly large, and in season it ripens between Aroma and Gandy.

Crescent (P)—One of the very oldest varieties grown at the present time. While it is discarded in most sections it is largely grown in other places yet on account of its season and productiveness. It is about the earliest pistillate variety, but after the first picking, the fruit runs down in size quickly, and becomes soft. Not profitable as a commercial berry.

Dayton (S)—This variety resembles the Haverland in size and shape of fruit, but is darker colored. It is a very early medium variety, productive, but not firm enough for long shipment. Believe you would like it as a garden berry or for home market.

Dornan (S)—This is rather a new variety, and was introduced as the Uncle Jim. We have been impressed with the plant growth of this variety; they are very thrifty, large crowns, large roots; the foliage is larger and taller than any variety we grow. It is medium to late in ripening, and productive of very large berries that hold up in size as well as the Bubach. While we can not class it as extra firm, we believe it is a variety that is worthy of trial.

Downing's Bride (P)—We have fruited this variety several years and consider it was appropriately named. The appearance of its fruit is as handsome as any bride could wish to be. It is very large, firm and productive; and holds up well in size to the very last picking. In color, it is of a deeper, glossier red than the almost ideal Ridgeway. Mid-season; and a

fair plant maker, which sends out very long runners, before another plant is formed, therefore does not set its plants close together. It makes a thrifty, upright foliage, though the plant does not make many of very long roots, and this feature might make against its productiveness in a very dry season. We believe it is well worthy of a trial by all strawberry growers, as it is very highly spoken of in other sections of the country.

Enhance (S)—Medium to late, a long season, a good pollener, first berries irregular in shape, but become regular after a few pickings; from medium to large in size, a good shipper, and a good plant maker.

Evening Star (S)—A new variety, that is claimed by some to be likely to take the place of the Aroma. We have not fruited the variety, but the introducer says: "Large, perfect bloom, with plenty of pollen. A seedling of the Gandy, and larger in fruit and plant than that variety, yielding double on the same soil. Berries of a bright red color, and good shippers." Late in season.

Excelsior (S)—An early berry, planted extensively, especially in some of the southern sections. It commences to ripen about the same time as the Michel, but after two or three days will ripen much faster than that variety; on that account it produces more extremely early berries than Michel's Early. Foliage tall and dark green, some rust; fruit almost round and very dark red; firm and a much better shipper than Michel. It is a good plant maker and if rows are allowed to become too thick, the last pickings will be small. A few object to it on account of its tart flavor, but we believe you will make no mistake in planting it for an early berry. It is productive, a nice looking berry, a good shipper and sure plant maker.

Gandy (S)—Before the Aroma became so well known, the Gandy was the favorite late berry among most strawberry growers. It is a good plant maker, very large, firm, and a good shipper, either in refrigerator cars or by express. It is not adapted to as many kinds of soil as the Aroma, and some seasons is not so sure a cropper as that variety. Because of its flavor is much desired for a canning or preserving berry.

Gardner (S)—Large stocky plants; favors the Clyde in general appearance, except it makes much larger, more robust foliage, sufficient to give perfect protection from the sun to the berries. It is very productive; it will not have as many ripe berries on at one time as the Clyde, but lasts longer, and will produce as much fruit, one season with another, as the Clyde. The Clyde will produce some larger berries than the Gardner, and some smaller. The Gardner is much more uniform in shape and size and will average fully as large during the season. We use it extensively to pollenate Haverland. Mid-season.

Glen Mary (S)—Very weak in pollen not fit to pollenate pistillates. It is fairly productive of nice large berries, and holds up well during the whole season. We like this berry better each year. Mid-season; has a robust, vigorous plant; but hardly up to the average as a plant maker.

Good Luck (S)—New. "The fruit of this new berry as compared with Gandy, is equally as large, more productive, and two or three days earlier; in shape it is conical to broad conical or wedge-shaped, with uniformly smooth, even surface, never seamed or ridged; color dark glossy cardinal, making a great

show both on the vines and in the package after being gathered. It ripens all over at once, with no green tips."

Greenville (P)—This is an old standard variety, well-known all over the country; it is very productive. We have never known it to fail in making a large yield of berries; like the Bubach it is classed as soft, but they ship well in refrigerator cars; a medium plant maker of fine healthy plants.

Haverland (P)—A standard variety that is more universally praised all over the country than any other. It has more good points and fewer faults than any berry we ever grew. It succeeds on all kinds of soil, and seems to be the least affected by frosts, often producing a full crop of perfect fruit, when other varieties are badly damaged. It makes a large stocky plant and sets just enough plants to make a perfect fruiting row. Medium in season, very productive, large to very large, and holds up in size to the last picking. It is long in shape, gradually tapering, and light scarlet in color. While it may not be as firm as some varieties, it is firm enough for home or nearby markets, and if not allowed to get too ripe before picking, will carry as long a distance as any variety. We have known this variety, shipped in refrigerator cars, to arrive in good condition, and bring the top price a week after they were picked.

Helen Gould (P)—New. Originated in Missouri. Medium to late in season; very productive of large, roundish conical fruit, glossy red in color.

Hero (S)—This is one of the newer varieties that have come to stay. We have fruited it for several years and like it better every year as a fruiter and pollener. The plant has many of the characteristics of the Haverland; a large rooted, stocky plant, and makes just enough for a good fruiting row. Medium in ripening, berry dark red, from large to very large in size, and does not run down in size as soon as so many varieties.

Hoffman (S)—This is nearly, if not quite, as early as Michel; some seasons it is more productive and others no more productive than the Michel; one great advantage it has, it does not make much more than half the plants the Michel does, so it matures much larger and nicer fruit. It is generally quoted on the market from fifty cents to a dollar a crate more than the Michel, as it is larger, a better shipper and better looking berry.

Highland (P)—New. Being first introduced two years ago by the reliable plant dealers, M. Crawford Co. Cuyahoga Falls, Ohio, who expect that it will become the most popular market variety yet offered. For the last four years the Ohio Experimental Station has found this variety to be the most productive of any tested. Plants very large, strong and vigorous. Fruit medium to large, bluntly conical; color bright scarlet; flesh red clear through.

Jessie (S)—An old variety that is adapted more to certain soils and localities, either as a home berry or a fancy market variety.

July (P)—Another new variety from Michigan. Described in part by the originator as follows: "This is without doubt the latest variety grown. It does not commence to ripen until other varieties are gone. A bright red, smooth handsome berry, of fine quality and good size."

Gen. Joe Wheeler (S)—"This variety comes from the South and is supposed to be a descendant of Lady

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Thompson, which its foliage very much resembles. It is about equal to the Lady Thompson in size, very much resembles it in color, and more productive. It ripens early."

Johnson's Early (S)—Here is an early variety that has good parentage, being a cross of the Crescent and Hoffman. It is very early, ripening about the same time as the Excelsior. It resembles the Hoffman in color of foliage, and the fruit is very large, highly colored, and of extra fine quality. On thin land it is not very productive, and many of the blooms appear to blight; but on heavy land it is very productive, and we doubt if there is any early variety that will excel it in size and attractiveness of fruit. It is a very prolific plant maker, and probably no other variety can equal it in this respect, therefore it is necessary to keep plants thinned for best results. Firm, a good shipper. If you have not tried the Johnson, we would advise a trial.

Klondike (S)—This is a variety that from reports and our own observations, we believe is a decided improvement over the well-known Lady Thompson. The Lady Thompson has been well proven, and during dry seasons especially has been a money-maker, for then it seems to do its best. But it is too light in color, and during the wet season gets soft. We have found the Klondike not to have these bad qualities. The Klondike is a good plant maker of dark-colored, clean foliage, as productive if not more so, than the Lady Thompson and two or three days later in ripening. The fruit is of good size, though not extra large, but holds up well in size and lasts a long season. Regular in shape, dark red in color and firm. In fact, is reported to carry extra well as a shipper. Probably no berry came so quickly to the front among Southern growers as a market variety.

Lady Thompson (S)—The well known Southern variety where it is largely planted. A good plant maker and fairly productive of medium sized, light colored fruit. It is second early in ripening and lasts a long season. It seems to thrive and do best during a dry fruiting season, apparently the drier it is the better it seems to do.

Louis Hubach (S)—A seedling of Warfield and Lady Thompson. An extra good plant maker and early in ripening. The fruit is of good size, very firm and quite productive. Said to stand drouth best of any kind.

Lyon (P)—A fair plant maker, medium to late in season. Productive, fruit medium, long conical, sometimes wedge-shaped. Color dark red, moderately firm.

Marshall (S)—An old variety, grown extensively by those who supply a fancy trade. Plant very large and healthy; fruit very large, roundish, and very dark, glossy red. Moderately productive and medium in season.

Mary (P)—This is an extremely large berry, but a poor plant maker, unless on strong soil and well cultivated. Fairly productive, medium to late, and very firm for so large a berry. In color it is very dark red, almost black when fully ripe. Recommended to those who cater to a fancy trade.

Mark Hanna (P)—A good plant maker and productive of very large, dark red, firm fruit. From medium to very late in season.

Meade (S)—New. Of Massachusetts origin. Strong, healthy plant, vigorous foliage. "The berries are of large size, globular, uniform shape; deep glossy red

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color on outside and red flesh all the way through." Productive, mid-season.

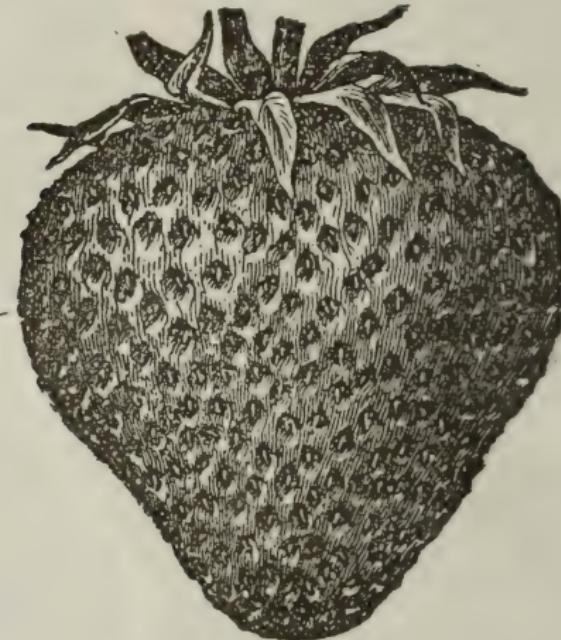
Mele (P)—This is an improvement on Crescent all around and about the same season in ripening. It is a prolific plant maker, and while it cannot be classed with the large berries, it is fully as large, if not larger, than the Crescent, and holds up much better to the last picking.

Michel (S)—An old variety, noted for its earliness and for being a prolific plant maker.

Mrs. Miller (P)—New. A very promising variety, if well rooted, thrifty, healthy plant growth is any indication; in fact, makes about the largest plant we grow. We notice very favorable reports from this variety wherever tried. "Fruit is very large, dark red and glossy, oblong in form, slightly flattened and of delicious flavor. It appears likely to win a position among the very best of our late varieties.

Midnight (S)—Claimed to be the very latest in ripening, and thrives well and fruits abundantly on every variety of soil. Fruit large size and firm.

Monitor (S)—A good plant maker and very productive of very large berries, uniform in shape. It is too soft for long distance shipping, but should give satisfaction as a home or near-by market berry.



Lady Thompson.

Morning Star (S)—An extra good plant maker. Foliage healthy, large and dark green. Originated in Virginia, and the introducer says, "At last we have in the Morning Star what has so long been wanted; a very early variety producing in great abundance, very large and beautiful berries of the highest quality. Ten days earlier than any other variety, producing large berries, firm."

Nehring's Gem (P)—New. "Makes a healthy, thrifty plant, and is a good yielder of good sized berries, conical in shape and bright red in color. It is one of the best keepers, either on the plants or in the baskets."

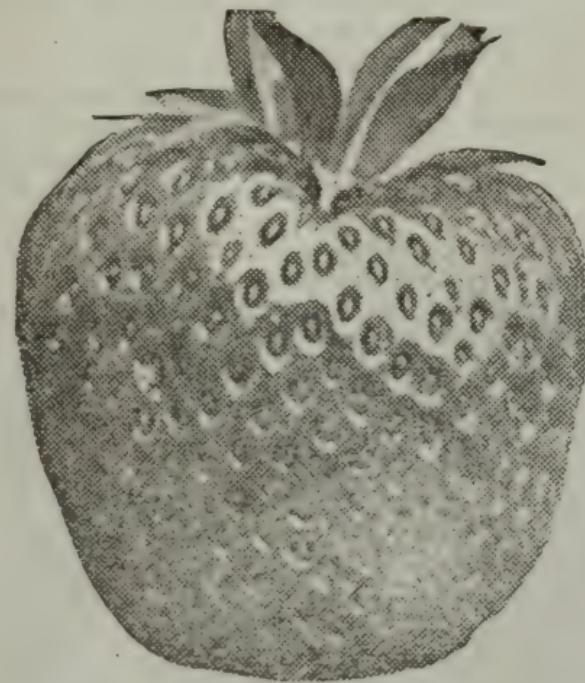
New Home (S)—This is the favorite variety of Mr. W. F. Allen, the large strawberry grower of Maryland, and who grows more of it than all other varieties combined for market. He says: "As late and large as Gandy, fruit a bright red color that does not lose its lustre and turn dark after being picked a long time. Uniform large size, and the best shipping and keeping berry grown. Vigorous grower and unlike Gandy will

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produce a large crop on either high or low land. So firm that it does not need to be picked oftener than three times a week, and for market that can be reached within twelve to twenty-four hours twice a week is sufficient. The plant growth has been very vigorous with us this season, making thrifty, clean foliage of light color.

New York (S)—An average plant maker; plants large foliage, very healthy. It is a cross of Bubach and Jessie. Medium in season and very productive of large size fruit. A berry highly spoken of wherever tried. Not extra firm, but especially recommended by the introducer for a local market or a market that can be reached over night.

Nick Ohmer (S)—“Productive of large, dark red globular berries, highly colored all the way through. A grand market berry and also a superb variety for the home table. Responds better to high culture and extra attention. Mid-season.”



Mary.

North Shore (S)—New. A good healthy plant maker. “The fruit is large, round, smooth, dark red with red flesh. Season medium.”

Oak's Early (S)—Originated in Maryland and named on account of its season, and having been discovered near a large oak stump. “Comes in with Michel and Hoffman and resembles the latter celebrated variety, but far superior to it in many respects, being much stronger in growth and three times as productive.” A very good plant maker, of healthy, dark colored foliage.

oom Paul (S)—Rather new. A very healthy plant maker. Productive of large sized fruit, dark red in color inside and out. The flesh is quite firm and of good quality.

Parson's Beauty (S)—This variety is vigorous in plant growth, with clean, thrifty foliage, and with us last season was the most productive of any variety; did not seem to be materially injured by the late freezes. Fruit medium to large, very dark red all through, but too soft for distant shipping. For a close market should be a valuable variety.

Parker Earle (S)—A very productive berry if all conditions are favorable, otherwise it will prove a failure. It must have very rich soil and plenty of moisture to mature its crop; when conditions just suit, it is immense. Does not make many runners, but has

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a tendency to stool from the mother plant.

Phillip's Seedling (S)—We are very much impressed with this variety last season. It is a good plant maker of medium size plants. The fruit is from medium to large in size, of good color, conical and regular in shape, but slightly corrugated. It is productive, very firm and seems to hold up well in size. Mid-season.

President (P)—Makes a very vigorous plant. Fruit very large, and holds up in size to the last picking. Round in shape, dark red, glossy and remarkably firm. Mid-season to late.

Pride of Cumberland (S)—A fair plant maker, with large, dark foliage. "Like Gandy, this berry will carry from Florida to Boston. It is brilliant red in color, and holds its freshness and lustre longer than most other varieties. It thrives on any soil, but owing to its immense crop, better results are obtained by putting it on rich land. The fruit is equal to Gandy in every respect, better in quality, and ripens one week earlier."

Pride of Michigan (S)—Introduced from that state. Very productive, second early in season, and fruit firm and dark red clear through. In size and shape, large and rather oblong, resembling Haverland in those respects. Foliage vigorous and a good plant maker.

Red Bird (S)—Originated in Mississippi, a cross between Murray and Hoffman, both extra early market berries. The foliage is somewhat similar to Hoffman, but much more vigorous in growth. It is said to be large, of good flavor, very productive, and an excellent shipper. Very early. Ripens with Excelsior, and superior to it in every way.

Ridgeway (S)—This variety succeeds well in nearly every part of the country. It is very productive, and though it is not extremely large, it is large enough to go as a fancy berry on any market. It is the most uniform in shape and size of any berry we grow. The calyx is large and the most beautiful tint of green to suit the glossy, deep red coloring of the berry. It has a fine flavor and ripens from mid-season to very late. We use it extensively as a late fertilizer for pistillates, being extra potent in pollen.

Rough Rider (S)—This is a good size, dark red, medium to late berry. Well liked in some localities, but is rather a slow plant maker.

Sample (P)—A very productive berry, medium to late in ripening; in fact, it should be classed as late, as more of its berries ripen in that season. A good plant maker, of strong, thrifty plants. Fruit above the medium in size, firm, nice color, and holds up well for a long season. Since we have noticed this berry it has gained in prominence each year. This berry will compare well with Aroma in the color and size of its fruit; it is not quite so round, but has more of a conical shape.

Senator Dunlap (S)—A variety that seems to give general satisfaction all over the country. It is a perfect bloomer and an extra prolific plant maker of medium size plants; medium in fruiting season, ripening about the same time as Warfield and resembling that variety in color and shape of fruit. The Dunlap is very productive, medium to large in size, and very dark red in color when fully ripe. It is firm, and has a peculiarity of remaining on the vines longer after ripening than most varieties without becoming soft. It seems to do well on all kinds of soil and in all sections. It is especially highly spoken of by Northern

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growers, where it is exclusively grown. Plants should be set twelve to eighteen inches further apart than Aroma or Haverland, or runners kept cut off, to get best results in size of fruit, for it is about the best plant maker we have.

Shuster Gem (P)—This is an early pistillate variety, ripening about the same time as Crescent. Its fruit will average larger than Crescent, although some of the first berries are irregular in shape. A good plant maker, very productive, and holds up better in size and lasts longer than Crescent. Some growers have found it a profitable berry to raise here.

Splendid (S)—An old variety. A good plant maker, very productive, and especially good as a mid-season pollenizer.

St. Louis (S)—New, from Arkansas. Originated and introduced by J. A. Bauer, who has introduced so many well known varieties. Mr. Bauer says he is very proud of the St. Louis, for he thinks it is the largest early berry grown. Plants have a very thrifty light colored foliage that lies close to the ground, and the root growth is extra fibrous. He says, "Berry is large as any early berry we have grown; we have picked twelve berries which filled a quart well filled. Ripens with Klondike, is larger than Climax, Lady Thompson, Excelsior, or any other early kind we have grown. Firm, finest of flavors."



Ridgeway.

Steven's Late Champion (S)—Most probably a descendant of Gandy, but it is considered a much better grower on a greater variety of soils. The fruit is large, long, a little flattened, and bright red in color.

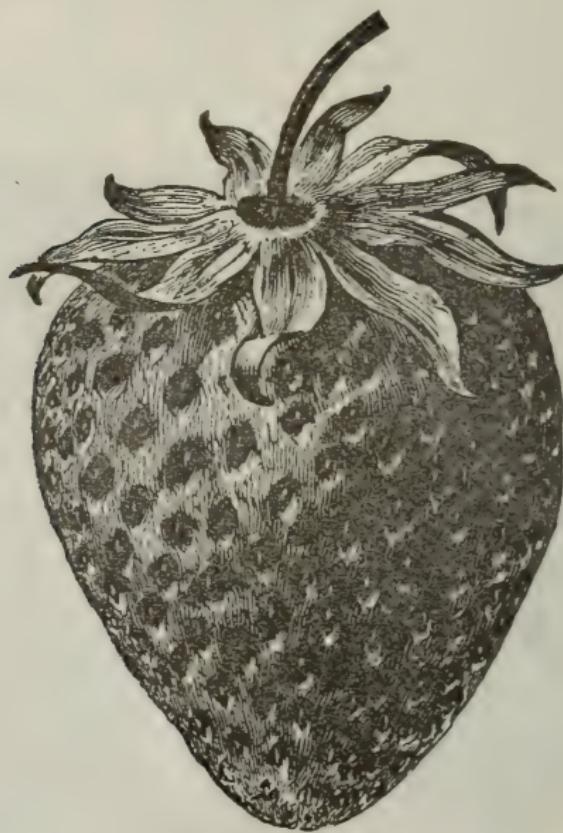
Sutherland (P)—Originated in New York. Claimed to be very productive of early berries of large size. As a market berry and for home use can not be equaled.

Tennessee Prolific (S)—It is both prolific in plants and fruit, a very healthy, robust plant, a good pollenizer for mid-season pistillates. We deem it one among the best of our old varieties.

Texas (S)—This is a new variety, introduced by

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the same man that originated the Excelsior. It resembles the Excelsior in foliage and growth, but is not as prolific in plants, and does not rust. We have fruited it for five years, and like it better every season. It is nearly as early as the Excelsior, but does not ripen quite as fast; fully as large or larger, lasts a long time for so early a berry, and produces more marketable fruit than any early berry we have grown. Many of the berries at the last picking are as large as the first ones. It is almost round in form, and makes a good appearance when crated. It seems to have strong recuperative powers, more so than most varieties. Last season on account of the late freezes all varieties were more or less injured and the Texas had all of its blooms killed as well as some green fruit that had set. But soon after it put up a new crop of bloom stems, and a month after other varieties were through fruiting, several growers here picked fine fruit from the Texas, at the rate of twenty-five crates per acre. It has continued to bloom and produce fruit, more or less, all summer, and was only checked by the fall frosts.



Senator Dunlap.

Virginia (P)—New. An early variety ripening soon after Excelsior. A good plant maker, very productive, and of an uniformly large size for an early berry. It is firm enough to make a good shipper and of a bright glossy, red color. Highly recommended by the introducer has a profitable early variety.

Warfield (P)—This was the leading berry in this section of the country for many years, and though not planted as extensively as it once was, quite a large acreage of the Warfield is planted each year yet. It is one of the best plant makers, and very productive. The first berries are large in size, but if the rows are too thick, or if it is not properly pollinated, the berries will soon get too small and knotty for a market berry. Some years on certain soils, under favorable conditions, it will produce as many crates to the acre of marketable berries as any variety. It is deep red in color, firm, and especially desired as a canning berry. If it was kept properly thinned it would be

more of a desirable variety, but as it is generally grown there are too many small berries to be profitable.

Blackberries and Dewberries

Early Harvest—One of the earliest. Rather a dwarf grower and fruit small, but it is of good quality and very productive.

Snyder—An old standard and popular in the North on account of its extreme hardiness; very productive, size medium, fruit juicy and sweet, strong, thrifty grower.

Lucretia Dewberry—This is the earliest and best of the blackberry family. It is very productive, fruit of extra large size, jet black in color, delicious in taste, and a good shipper. Very popular for table use or canning. The plant is very healthy and thrifty, throwing out numerous long runners. Set plants four feet apart in rows six to seven feet apart, and keep well cultivated.

NOTE CAREFULLY—In the descriptions of the different varieties, we have tried to give our honest opinion, after carefully noting their behavior in our own fields, regardless of the opinions of any other persons. Our desire has been not to mislead or disappoint anyone. Though we had many of the newer varieties in our fruiting beds last season, on account of the severe late freezes which injured more or less every variety, we found it difficult to form a reliable estimate of their fruiting qualities, and therefore have again given the descriptions of the introducers.

Numerous new varieties are being introduced each season, and many of them are adapted only to the soil or climate or season in which they originate. A few prove equal to some of the well-known and general grown varieties, but it is only now and then one is found to be superior.

All strawberry growers owe a great deal to those who propagate new varieties, and who so patiently follow their work, and sometimes if their enthusiasm over-reaches the facts, we would rather hold it was a mistake and not a fault.

It requires several seasons' tests in different sections and under different conditions before a variety can be safely recommended for general commercial planting, but we believe all growers who make the raising of strawberries their main business, should be among the first to try a few, at least, of the most promising new sorts, and carefully note the reports on the others—it is in line of progress, and progression is as necessary in the strawberry industry as in any other.

And we desire to again call your attention to the fact, that the most essential thing in starting a strawberry bed is to get plants that are **true to name**; and if you do not know, you will soon learn, that it pays to buy, not the cheapest plants, but from those who have a reputation to sustain, and whose prices are made as low as is consistent with the expense, labor and carefulness required to produce good plants true to name. Too many beginners are discouraged by purchasing plants that are inferior and not true to name. If they do not quit the business, it takes a season or two to recover from the loss and inconvenience caused.

We invite you to compare our prices with those of any reliable plant dealer. We are satisfied you will find them as reasonable, and in many instances considerably lower. We believe our natural advantages of soil and location, enable us to grow plants cheaper

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than many growers not so favorably located, and who use expensive fertilizers to produce their crops. Plants grown in a natural soil and climate, without the assistance of artificial means, have all their native vitality unimpaired; and if given the same soil, same conditions, same culture, we guarantee our plants to yield as much and as fine fruit as any grown.

Price List

Important—Write your name, postoffice, county and state plainly, and be particular as to shipping directions. Should your shipping station be different from your postoffice be sure to mark same very plainly.

(Would prefer that order sheet as attached in catalogue be used.)

Will allow 50 of a kind at the 100 rate and 500 of a kind at the 1000 rate. Less than 500 of a kind must be figured at the 100 rate.

The prices quoted are f. o. b. station at Sarcoxie or Durant. If ordered sent by mail add 5 cents for each dozen, 10 cents for each twenty-five, 15 cents for each fifty, and 25 cents for each one hundred, for postage.

The varieties marked (P) are pistillates, or imperfect bloomers, and must have a stamineate (S), or perfect bloomer, planted every third or fourth row to pollenate them. The pistillates if properly pollinated are generally the most productive.

Discount—On all orders received before February 1st, with cash in full a discount of 10 per cent and on orders received before March 1st, with cash in full, a discount of 5 per cent will be allowed from catalogue prices. These discounts are good only until dates mentioned.

If you will want 20,000 or more plants, send us list of varieties, and we will return to you at once our best quotations on them.

Should you receive more than one of these catalogues, please hand the extra one to some person interested in fruit growing.

This list abrogates all former prices.

Extra Early.

	12	100	1000	5000
Almo (P)	\$0.70	\$0.50	\$3.00	\$13.75
Beder Wood (S) .....	.00	.00	3.00	.....
Excelsior (S) .....	.20	.40	2.75	12.50
Hoffman (S) .....	.20	.40	2.75	12.50
Johnson's Early (S) .....	.20	.40	2.50	11.25
Louis Hubach (S) .....	.20	.50	3.00	.....
Michel (S) .....	.20	.40	2.00	11.25
Morning Star (S) .....	.20	.30	3.00	11.25
Oak's Early (S) .....	.20	.50	3.00	13.75
Fed Bird (S) .....	.20	.50	4.00	.....
Texas (S) .....	.20	.40	3.00	13.75
Virginia (P) .....	.15	.60	3.50	.....

Early.

	12	100	1000	5000
Arnouts (S) .....	.20	.50	.....	.....
Challenge (S) .....	.20	.40	4.00	.....
Climax (S) .....	.20	.50	3.50	.....
Clyde (S) .....	.20	.40	3.50	.....
Crescent (S) .....	.10	.40	3.00	13.75

D. McNALLIE PLANT AND FRUIT COMPANY.

Please Use This Sheet in Ordering Plants

ORDER SHEET

D. McNallie Plant & Fruit Company

1909

Amount Enclosed, \$

Name _____

Post Office

County _____ State _____

Express or Freight Office

Ship by _____ On or about _____

(Mail, Express or Freight)

D. McNALLIE PLANT AND FRUIT COMPANY.

FRUIT GROWERS

For names and addresses of twenty or more bona fide small fruit growers residing in your vicinity we will allow you a credit of \$1.00 on a plant order of \$2.00 or more at catalogue price, if mailed to us before March 1st.

GARDEN OR TABLE VARIETIES.

Collection "A"—100 Michel (Early), 100 Warfield (medium), and 100 Gandy (late), will be sent for \$1.00, purchaser to pay express charges.

Collection "B"—50 Michel and 50 Johnson's Early (early), 50 Senator Dunlap and 50 Warfield (mid-season, and favorites for canning), and 50 Ridgeway and 50 Aroma (late), will be sent for \$1.00, purchaser to pay express charges.

Collection "C"—100 each of the six varieties named in Collection "B" for \$2.00, purchaser to pay express charges.

All the above varieties are standards, the very best producers, and do well in all sections of the country. By being divided between the early, medium and late seasons they will yield fruit from five to six weeks. Collections "A" and "B" properly cultivated, in average seasons, will produce seven to eight bushels of berries and Collection "C" fifteen bushels or more, making a sufficient supply for table use and for canning.

HOME MARKET VARIETIES.

(Some of these are too soft for distant shipping.)

Early—Excelsior, Johnson's Early, Mele, Michel, Shuster Gum.

Medium—Bubach, Dayton, Dornan, Gardner, Greenville, Monitor, Haverland, New York, Parson's Beauty, Phillip's Seedling, Senator Dunlap, Warfield.

Late—Aroma, Brandywine, Mary, Ridgeway.

STANDARD SHIPPING VARIETIES.

Early—Excelsior, Johnson's, Texas, Lady Thompson.

Medium—Downing's Bride, Glen Mary, Klondike, Haverland, Hero, New Home, Phillip's Seedling, Senator Dunlap, Warfield.

Late—Aroma, Gandy, Sample.

SOME STAMINATIES OF SUITABLE SEASON TO PLANT WITH PISTILLATES.

With Bubach (P)—Bismark, Gardner, Hero.

With Crescent, Mele, or Shuster Gem (P)—Excelsior, Johnson's, Texas, Lady Thompson, Splendid.

With Downing's Bride or Haverland (P)—Clyde, Dayton, Gardner, Phillip's Seedling, Ridgeway, Texas.

With Mary or Mrs. Miller (P)—Armstrong, Brandywine, Ridgeway, Hero.

With Sample (P)—Aroma, Gandy, Ridgeway.

With Warfield (P)—Phillip's Seedling, Splendid, Tenn. Prolific, Senator Dunlap.

NUMBER OF PLANTS REQUIRED TO SET 1 ACRE.

18 inches by 3 feet	9680 plants
18 inches by 3½ feet	8297 plants
18 inches by 4 feet	7260 plants
24 inches by 3½ feet	6222 plants
24 inches by 4 feet	5445 plants
30 inches by 3½ feet	4978 plants
30 inches by 4 feet	4356 plants
36 inches by 3½ feet	4148 plants
36 inches by 4 feet	3630 plants
48 inches by 4 feet	2722 plants
48 inches by 6 feet	1815 plants
48 inches by 7 feet	1555 plants

How to Set and Grow Strawberries

(This treatise on How to Set and Grow Strawberries was prepared by D. McNallie five years ago, and with some alterations we present it here, thinking it might be of some interest and benefit to new beginners.)

SELECTION OF GROUND.

Where conditions are such that you can have a choice in selecting the kind of land to suit best for a strawberry patch, select it nearly level just so it has a very gradual slope, sufficient to properly drain the water from it; if too flat, water will stand on the berries in a wet time, and if too sloping, hard rains will wash ditches between or across the rows. If steep hill sides have to be used, don't run rows up and down the hill lengthwise, but sidewise with the hill; it is better for the water to cut ditches across the rows than between them, as it is impossible to cultivate satisfactorily with rows standing on ridges.

KIND OF SOIL.

While any kind of a soil that will produce any kind of a crop will produce strawberries, don't expect to get a very large crop of berries from very poor soil, as it won't make it. Your yield will be in proportion to the fertility of your soil, other conditions being equal. Ground that will produce an average crop of thirty to forty bushels of corn to the acre in this section, is considered good berry land, and will produce on an average, 200 crates per acre without any fertilizing. Use the richest ground that you have and your crop will be in proportion, both in quantity and quality, like other crops. But if your neighbor has poorer land than you and cultivates and tends his berries better, and raises larger berries and more of them, don't say that poor land is best, but that labor is justly rewarded. If soil is poor, manure and work it in well before setting out your plants.

PREPARING GROUND.

Ground should be broken as soon as the crop that you are going to follow with berries is harvested, and if stubble, either sown in peas, to be turned under to enrich the ground, or cultivated sufficient to keep any weeds from going to seed during summer and fall. During the winter, or at least, two or three weeks before time to set plants, as you catch ground in right condition, rebreak very deep, but don't harrow until time to set plants. If you get a rain on the ground before time to prepare it for plants it will be a great help, as it is very hard to get dry loose, broken ground in right condition without. When ready to set out plants, thoroughly pulverize the soil as deep as possible, the deeper and finer you get the soil the better it will retain moisture, and be more available for feeding plants. Use a roller or drag for packing your ground and making it smooth and level. I prefer a plank drag for last working as it fills up the horse tracks much better and leaves the ground far smoother and level. Don't work your ground at any time while wet. Take great pains in preparing the ground for like all other work in a strawberry field, it can not be done too good for best results.

SELECTING PLANTS.

If you have grown your own plants, don't use anything but the very best, and only from new beds.

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If you are buying your plants from some one else, you should be careful about placing your order. Don't make the price the first consideration that is important. But, "Am I getting what I ordered?" is much more important. If you are located so that only early varieties pay, and you order Excelsior plants, and receive Gandy, you can readily realize the great loss you would sustain and you should guard as much as possible against this, and not buy plants from any one that will not guarantee their plants true to name, and not mixed, and also investigate and find out whether the person making the guarantee is responsible and honest enough to make their guarantee good. I realize that refunding money or replacing the plant does not cover the great loss that is sustained, but it does cause a responsible plant dealer to be more careful to keep his fields pure. Be very careful about handling your plants, not to get them mixed; have every bunch labeled with name of variety, and leave label in bunch until ready to use.

SELECTING VARIETIES.

This is a very important question and should have your most careful consideration. It is possible that on this one question alone depends your success or failure in the strawberry business, and you should take time and deliberate carefully before deciding on your selection. If you were only putting out plants for one year's crop it would not matter so much, but here we generally fruit a field from three to five years, so that makes it more important. Now in making your selection don't have just one idea in mind, and that in regard to productiveness, that is important, but no more so than others. I believe size is the most essential point in selecting and should be the first consideration. Did you ever read an article written by a strawberry grower in a bragging frame of mind and telling about receiving 10 cents a quart more for his berries than any of his neighbors, claiming that it was on account of the productiveness of his berries? No, it was always on account of their size. Did you ever hear of a man sending strawberries to the market and getting a poor price because they were too large? Never! But I think you know of growers receiving very unsatisfactory returns on account of their berries being small. We all know these things to be facts. Why not profit by our knowledge? I think it advisable for every fruit-grower to try some of the most promising new varieties in a small way, so that if they prove superior to our older ones we will know whether they will suit our condition of soil, climate, etc., and not wait until some one of our more progressive neighbors force us to use them or quit the business.

QUALITY.

I never pay any attention to the quality of a strawberry; in fact, I do not care what the quality is. This delicious flavor we hear so much about—"Who does it suit?" If it suits me you might not want to eat it; our tastes are different, much more so than our eyes. If a berry is large, has a good shape and a beautiful color, the eye is pleased with it, and I think the eye has a great influence on the palate and it will be satisfied, if not, just the right quality of sugar and cream will do the work. For illustration, take the Ben Davis apple. There has been ink enough thrown at it to make it as black as sin, just because it did not suit some one's taste, but it has gone on climbing, until it has reached the top round and is

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shining brighter than ever. Talk about quality, "bah!" Who ever saw a large, beautiful, ripe strawberry that was not fit for the "gods?"

ONE OR MORE VARIETIES.

To save a great deal of corresponding I will state here that I can not advise parties at a distance what variety or varieties will be the most profitable for them to grow. I do not know their conditions, and it would be impossible for me to advise them intelligently, as the location and competition must govern this wholly. There are locations, no doubt, where the earliest, others where medium early, and others where the latest berries pay the best, owing to competition, but as a general thing, where you have a home market, or as we are situated here, I would advise protracting the season as long as possible for the reason some seasons the early and others the late berries bring the most money; while the medium hardly ever brings as high a price as one of the others, it generally brings as high or higher than the other one, and the yield of the medium is so much larger that it frequently pays the best even at a lower price. As our conditions are here, I would not advise any one to grow for market just one season berries; three chances are better than one, and my advise is to take three.

WHEN TO SET.

Set plants as early in the spring as ground will do to put in condition, and danger of freezing is over. Freezing does not hurt the plants if it is not hard enough to heave them out of the ground and expose the roots to the air. I would sooner take chances on a hard freeze early, while the ground is moist and cool, than risk a dry, windy, hot time later in the season. If a strawberry plant once gets well established and starts to grow and is well cultivated it can hardly be killed, except by a white grub eating it up. From middle to last of March is the best time in this latitude, while some seasons it will do even earlier. I believe I can sow strawberries broadcast and harrow them in March, and get a better stand than the man will who sets after May 10th, with the greatest of care. A great many people have the impression that one time is as good as another to set plants, judging from the orders I have received.

FALL AND WINTER PLANTING.

We believe that the one prevailing opinion that the fall and winter planting of strawberries could not be made a success has in recent years been found by practical growers in different sections to be erroneous; except possibly in some localities where the winters are extremely severe, or on low, wet soil where spring planting is always more advantageous. By planting during these months one avoids more or less, the rush of spring work, and the plants becoming established are ready to start early growth in the spring. In the section north of a line through St. Louis, it is generally advisable to cover the plants during the winter to prevent heaving, with a mulch of some kind, strawy manure being preferable; but the early start in the spring more than compensates for any extra labor or expense.

With us there is no question as to the success of fall and winter planting if plants are set after they become dormant from their summer growth, generally after September 20th. No doubt, some of the failures of fall setting can be attributed to transplanting before plants had become dormant and completed the

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formation of their fruit beds.

A large portion of our plant fields at Sarcoxie was planted in December, 1906, and the thriftiness of the foliage and the number of early new plants made by these plants, compared even with the early spring set plants of 1907, was very noticeable all summer. About one-half of our new acreage for 1908 was planted in October, 1907. November 15, 1907, the stand was perfect, and every plant had formed three or four leaves, and had new rootlets an inch or more long. We covered the plants set in the winter of 1906, with a light mulch of strawy manure, also using some wet straw from around stacks. This mulch was applied by hand, but this past fall we covered our fall set beds with strawy manure, wet straw, and other waste matter, using a manure spreader to scatter same.

For several years on account of the heavy demand for plants just at the season in the spring when we should be setting our new fields, we have discussed the propriety of setting our fields in the fall, but were held back by hearing of more or less failures in the past from this season of planting. We believe that our two years experience has demonstrated that if plants are set after becoming dormant, fall planting can be made a success, and we do not hesitate to advise that time of setting, and especially if one has many other spring crops to plant. We are satisfied that in northern latitudes any extra labor of mulching will be more than over-balanced by the early start over spring planting; and then generally in the fall one has more time to give the planting proper attention.

HOW TO POLLENIZE.

Where your pistillate varieties are prolific plant makers, and you allow them to set too thick in row, you should use staminates with the same tendency as much as possible. My observation leads me to believe that the principal cause of so many buttons and poorly developed berries is on account of not sufficient pollination; and this is the effect of pistillates being allowed to make plants out of proportion to the power of the staminates that are used, to produce plants and blooms. While it is safe to use a perfect flowering sort every fourth row with an imperfect bloomer, that is a poor plant maker like the Bubach—such plant makers as Warfield, Barton's, etc., should be fertilized every third row for best results. I would recommend using two pollenizers of different seasons for all pistillates. For instance, for a pistillate classed as medium you should use a stamine classed as early and another as medium to late. By doing this, if from any cause the bloom of one is damaged, you have another chance for fertilizing. It is not always the early bloom that is damaged the most by frosts or cold rains, it is the condition the bloom is in at the time of danger; when a bloom first opens out it points directly upwards, ready to be damaged in the most vital parts; later, it commences to turn down out of danger. As far as you can, select staminates that will correspond with the pistillates in size, shape, color, etc. If there is a close resemblance in these particulars it will be much more convenient in picking, as they will not have to be kept separate. I am willing to admit that this is hard to do with our present knowledge; but am in hopes that in the near future our stamine varieties will be equal, if not better than our pistillates in all respects.

SETTING PLANTS.

There is no iron clad rule to be laid down for setting plants, as there are a dozen different modes practiced and each one believes his way the best. On beds of one or two acres or less, a line marked in some manner at the distance apart plants are desired to be set, is probably the best and most used method. On beds larger in size, some of the growers check off their ground both ways, making the rows three feet and one-half to four feet wide, and cross marking from thirty to thirty-six inches, or whatever distance they desire plants set.

The distance apart to set plants in a row depends on the varieties planted. If plants are set early in the spring, from twenty to thirty inches apart during average seasons will secure a good fruiting row of varieties that are good plant makers; while extra prolific plant makers can be set thirty to thirty-six inches and produce a good row. Some varieties that are rather poor plant makers should be set eighteen to twenty inches apart. In beds of three or four acres and up we advise checking the rows both ways, and if this is carefully done, it will enable you to cultivate cross ways two or three times before runners start to set, thereby saving much of the first hoeings.

The instruments most used in setting plants are the common garden spade and the dibble; the latter is an instrument shaped something like a trowel, but has a straight shank to which the handle is fastened horizontally, and made of somewhat heavier material. Either instrument will answer the purpose, but the main object is to get the dirt firmly pressed around the plant, not only at the top, but down to the bottom of the root so there will be no air space left causing the plants to dry out.

Trim the roots to three or four inches in length, and be careful about the depth plants are set in the ground. They must be set deep enough so that no part of the root is exposed to air or sun, and not so deep that the crown is covered with dirt. Don't allow plants dropped faster than dibblers can use them, and keep them protected by a wet cloth in a basket. Never expose plants to sun or air an instant more than necessary.

CULTIVATING.

Cultivate as soon as possible after setting, the same day if convenient. Cultivate often. If you have ground that packs and runs together bad it may be necessary to cultivate two or three times a week, after a hard, beating rain, to get your ground in proper condition. Where ground is packed hard, as soon as dry enough, plow shallow the first time so as not to break ground up cloddy, follow immediately before it gets too dry, and cultivate as deep as possible, then shallow again to level down. You will need to cultivate twenty or thirty times, owing to kind of season, for best results. Cultivate from time you set out plants until killing frosts. Don't ridge your plants, they will naturally do that, but work the dirt away from row, and keep as level as possible. By doing this it will be much better for your first crop and leave rows in better condition for renewing for second crop. After setting out plants, cultivate as close to them as you can without disturbing the roots. Allow first runners to set until you have a row formed not to exceed eighteen to twenty-two inches in width, that is as wide as you can permit and have plenty

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of room between for picking. It is true that most of our scientists on strawberry culture advise us to keep runners cut off until about the first of August, to allow the mother plant to become well established before setting any runners. Now the theory may be all right, but does not appear sensible to me. We are depending just as much on each of twenty or more runners that we get from the mother plant to make a crop of berries as from her. Then is it not better to let the first runners set and give the plants a chance to make a good growth, as well as the parent? No danger of a plant putting out runners until it is well established. When runners first form pull them around with cultivator until you have row filled between hill first. Always plow the row same way each time. After filling in between the hills run the cultivator a little further from plants each plowing until you have a row of proper width, then attach rolling cutters to cultivator and keep runners cut off balance of the season. Don't wait too long between plowings while runners are forming fast, or you will get your row too thick. Try to get plants set in the rows from four to six inches apart; that is as close as they should be to produce fine berries. Keep the blooms cut off the first year; if the plants are allowed to fruit it stops the growth and consumes much of the vitality. Everything possible is to be done with the cultivator, but you will have to do a great deal of hoeing also; your first hoeing between the hills wants to be good and deep to get the ground that has been packed well loosened up, but be careful not to disturb the plants. Keep your field properly clean of weeds the whole season, early as well as late. If you allow the weeds and grass to get the start of you at any time you may become discouraged. Never stop hoeing and cultivating because there are no weeds. If you have ground so poor that weeds will not grow there is the more need of work to change the particles of earth and get some fresh food where the plants can reach it, or they will starve. I believe that intense cultivation without fertilizing is better than poor cultivating and plenty of fertilizing; both are much better than either alone.

MULCHING.

If you have only an acre or two of berries you can wait until the ground freezes hard, but if you have several acres would advise you to commence mulching as soon as frosts are hard enough to check the growth of plants and turn the foliage brown. Mulching is slow work if you have to haul the material quite a distance; it is better to commence early in winter. During cold, wet weather it is disagreeable work, and you cannot make much progress. Every berry grower ought to mulch sufficient to keep the berries clean. We commence here about the middle of November. Wheat straw is used principally—the objection to it being that the wheat and cheat left in the straw grow during the winter and sometimes cause considerable damage to berries during the fruiting time. Prairie hay may be used if one is situated so they can afford to use it. In this latitude I do not think it necessary to mulch for winter protection. The rank foliage of our matted rows seems to me to be sufficient to protect the plants from heaving. One ton of straw or prairie hay carefully spread over the rows is sufficient to keep berries clean, but two or even three tons won't hurt, if raked off between the rows as soon as plants start to grow

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in the spring. And if it should be dry during picking the heavy mulching will be much the best, as it will keep the ground moist much longer.

This past season we used a manure spreader in applying the mulch, and found it to give very satisfactory results. By adjusting the hood attached at the back of the machine, two rows, four feet apart, were covered at one time, and more evenly and with less material than if done by hand. On our new fall set beds the spreader was immediately followed by a cultivator which threw a little dirt on the edges of

thereby keeping it from being blown off. For our fruiting beds with their wider matted rows, we previously had wheat straw hauled and unloaded at the ends of the field. To get on a sufficient load of this material, a frame was attached to the box of the spreader, and a hand kept on top of the load to pack straw down, so that it would readily feed through the machine. By adjusting the openings in the hood to the width of the rows the mulch was evenly distributed, and two rows covered at once. To those who have, or can secure a spreader, we advise a trial of this method of mulching. From our experience, we found it quicker, cheaper and the result more satisfactory, as the spreader will evenly distribute most any kind of litter or waste matter.

PICKING AND PACKING.

This is one of the most important phases of the strawberry industry. You may have given the bed good cultivation, and have a fine prospect, but if the fruit is not properly picked and packed, you will not get corresponding financial results. Have every thing ready before time to commence picking. Make crates and carriers during the winter. Use clean packages only, and have springs on wagons in which berries are hauled. Pick every day after the season is fairly started, and if weather is rainy or there is much dew, wait until the fruit dries off somewhat before picking. Put a picker on each side of row, and do not allow them to snap berries from vines, but pick with a stem one-half to three-fourths inch in length. Watch carefully that all ripe fruit is picked each time. Do not permit over six quart boxes to be taken to the field, as it keeps berries exposed too long to the hot sun. Pack the fruit immediately in crates and store in a shady place protected from air, so the fruit will keep its fresh appearance until ready for market.

If picking for a local market, or a market that will be reached over night, pick the fruit fully ripe, but not over-ripe or soft. If it is to be sent to a farther market, it should not be picked fully ripe, about three-fourths ripe will carry better, and it will ripen in transit. Try to grade the berries in the field if they need grading, for every time a berry is handled it is damaged to a certain extent. Have each variety picked and crated separately, where possible, as uniformity in size and color has much to do with the appearance of the fruit. This part of the work should be under the supervision of one interested, and any extra pains or labor taken will be rewarded.

RENEWING.

A strawberry bed can generally be retained from three to five years if properly renewed and cultivated. And to get the best results the work should be begun immediately after the last picking.

Mow the vines off close, and if the bed is covered with a moderate mulch, evenly distributed, it may be

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burned over as soon as dry enough. This method is the best for getting rid of any fungous diseases or insect pests, and leaves the ground in fine condition for clean cultivation. If the burning is done when there is a brisk breeze to carry a quick fire, there will be no harmful results. For a few days it may appear there is nothing left, but in a short time the plants will put forth thriftier than ever.

If the mulch is not burned off, it may be plowed under between the rows, or if too thick raked up and removed from the field before cultivation. As soon as vines have been mowed, plow down the middle of each row with a common turning plow, throwing the dirt from the row, and then plow out the center between the rows, thereby leaving a strip, six to ten inches wide on the side of each row. The side of the row is left because the plants there are younger, and will start to make runners more freely than the older plants in the center. To further reduce the plants, and to put the ground in condition for cultivation, harrow the rows lengthways and then two or more times crossways. The older a bed becomes the fewer runners will be made from the plants left. So the width of the row and the number of times harrowed, will depend to a great extent on the age of the bed. After harrowing the bed is given the same cultivation as for a new bed.

Some growers successfully renew their fields with a disc harrow. Removing three of the discs, from the center, and then the outside discs, until three are left on each side. By placing heavy weights on the remaining discs and driving lengthways of the row each side is cut off at the same time. Harrowing is then practiced as when the turning plow is used. The disc harrow is especially recommended where the mulch is not burned or removed, as it cuts up the mulch and works it into the ground, leaving the field in good shape for cultivation.

COST PER ACRE.

This is a very difficult question to answer, for so much depends on the location, kind of soil, and weather conditions during the growing season. But from several years experience and observation we would say that the average cost of growing an acre of strawberries during a normal season is fifty dollars. In a very favorable season this cost might be lessened as much as ten dollars, while during an extremely wet season, or on very foul ground, the cost might be increased the same amount. In this estimate we do not take into consideration the use of commercial fertilizers or any expense of enriching the ground.

For illustration we give the following approximate figures as to the cost per acre up to harvesting time.

Rent for one acre	\$ 5.00
Plowing and preparing ground	2.50
5000 plants (standard varieties)	15.00
Expense setting plants	5.00
Cultivating—fifteen times	7.50
Hoeing—three to four times	10.00
Mulch and spreading same	5.00
	—
	\$50.00

There are numerous places throughout the United States of from one to ten thousand population who do not receive a sufficient supply of strawberries—principally because they are not large enough to dispose of

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car lots before perishing. To many around such places there is an excellent opportunity to commence the growing of this fruit and supply the steadily increasing demand.

There are no secrets to the growing of strawberries. Procuring good plants—true to name, thoroughly cultivating, and careful and honest packing are the essentials. It is the surest fruit crop that grows, in frigid, temperate or tropic climes. We have never known of a complete failure. In Southwestern Missouri last year, all other cultivated fruits were entirely killed by the severe freezes. With the exception of a few of the earliest varieties, from one-third to one-half a crop of strawberries was harvested, while some of the later kinds produced a full yield.

PROFIT PER ACRE.

A question as difficult to answer, as the amount will be governed by the varieties grown, the yield, closeness to market and the manner of grading and packing. On soil that will produce thirty to forty bushels of corn per acre, without the use of any fertilizers, the average minimum yield of strawberries will be one hundred twenty-four quart crates; and the average maximum yield two hundred twenty-four quart crates. In a favorable season, and where the bed has been given proper culture, the maximum yield is often exceeded.

The price received depends mostly on the supply and the quality of the fruit, generally varying from 6 1/4c to 12 1/2c per quart. Taking 8 1-3c as a conservative average price per quart throughout the season, the gross returns per acre of a one hundred crate yield will be \$200.00; of a two hundred crate yield \$400.00. Deducting the expense of picking, 1 1/2c per quart, and the cost of crate, 14c, or a total of 50c per crate, the net returns will be from \$150.00 on the minimum yield to \$300.00 on the maximum yield. From these net returns charging the average expense of \$50 for growing one acre, the profit will be from \$100.00 to \$250.00 per acre.

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THE PIERCE-WILLIAMS COMPANY

South Haven, Mich.

Jonesboro, Ark.

The Sarcoxie Strawberry

¶ Sarcoxie, Mo., claims the distinction of being the mother of the many strawberry shipping towns in the Ozarks of Southwestern Missouri and Northwestern Arkansas. The industry was originated here by one who by nature and experience was a lover of horticulture, and the first shipments were a few crates to the near-by markets. Others learning of the profitable sales, and that there was no mysterious secret in producing the fruit, embarked in the business in a small way.

¶ Two or three years later the planting of five acres in one tract by two experienced nursery workers started the cry of over-production that has been echoing and re-echoing through this section ever since. But the returns from these shipments, which went principally to the Western markets, netting \$300 to \$400 per acre, in the next year or two nearly every farm within five miles had one to forty acres in strawberries, and the merchant, the banker, the lawyer, the doctor, were interested, directly or indirectly, in the growing of this delicious small fruit, that is said to contain 96 per cent water, and the other parts coloring, but is relished by all mankind.

¶ In 1897, the banner year of production, 232 cars, containing 640 24-quart crates each, were shipped from Sarcoxie to nearly every important market of the West, North and East, and the place became noted as the largest strawberry shipping town in the Middle West. Neighboring towns became interested in the industry, and in 1906 over 800 cars were shipped from thirty places in the Ozarks, where the natural advantages of the soil are as perfect, if not the most perfect, for growing strawberries of any section in the United States.

¶ Since the beginning of the industry at Sarcoxie, there has been a gradual progression in the varieties grown, the methods of grading and packing, and the means of transportation and marketing.

¶ The Crescent, Capt. Jack and James Vick were the varieties most largely planted by the early growers. In time the Michel, Warfield and Gandy became the most popular varieties, while today the Texas for early, the Haverland for mid-season, and the Aroma for late, are the leading commercial varieties planted.

¶ Transportation and refrigeration have kept pace with the rapid growth of production, and apparently, train loads are handled as quickly now, and arrive on the markets in as good or better condition, as were the few crates produced at first.

¶ Most of the growers have found the raising of strawberries profitable, and especially those growers who have taken an interest in the work, planted the leading varieties, and given thorough cultivation. In the last fifteen years over a million and a quarter dollars net have been received by the growers around Sarcoxie for this fruit, and thousands of dollars are paid out annually to an army of pickers, who come for miles, to assist in harvesting the crop.

¶ The industry is not only profitable to the growers, but to the entire community in which it is followed. There is no fruit that is so easily and quickly grown, and that will respond so readily to proper culture and care.

ESTABLISHED 1894
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INCORPORATED 1907

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350 Acres of Strawberries Under One Management.

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Durant, Okla.

J. F. McNALLIE, Sec.

Sarcoxie, Mo.

M. B. McNALLIE, Treas.
Sarcoxie, Mo.

Sarcoxie, Mo., 110 Acres
Durant, Okla., 100 Acres
Miami, Okla., 140 Acres

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